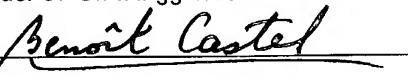


TRANSMITTAL LETTER OF THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		Attorney Docket No. <u>0512-1022</u> U.S. Application No. <u>10/070950</u>
INTERNATIONAL APPLN NO. <u>PCT/FR00/02531</u>	INTERNATIONAL FILING DATE <u>13 SEPTEMBER 2000</u>	PRIORITY DATE CLAIMED <u>14 SEPTEMBER 1999</u>
TITLE OF INVENTION: DYNAMIC DEVICE FOR DIFFUSING PERFUMES AND PROCESS FOR CONTROLLING THIS DEVICE		
APPLICANT(S) FOR DE/EO/US: <u>DOMINIQUE BALBI AND JACQUES MESSAGER</u>		
<p>Applicant herewith submits to the United States Designated Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371</li> <li>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input checked="" type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2)) <ul style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau)</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau See attached PCT/IB/308.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ul> </li> <li>6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)) <ul style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4)</li> </ul> </li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3)) <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau</li> <li>c. <input type="checkbox"/> have not been made, however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ul> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</li> <li>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> <p><b>Items 11 to 20 below concern document(s) or information included:</b></p> <ol style="list-style-type: none"> <li>11. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS) w/PTO-1449 - <input checked="" type="checkbox"/> Copy of IDS citations</li> <li>12. <input type="checkbox"/> Assignment Papers (cover sheet &amp; document(s))</li> <li>13. <input checked="" type="checkbox"/> A FIRST Preliminary Amendment.</li> <li>14. <input type="checkbox"/> A SECOND or SUBSEQUENT Preliminary Amendment.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input type="checkbox"/> A change of power of attorney and/or address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule</li> <li>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application (35 U.S.C. 154(d)(4)).</li> <li>20. <input checked="" type="checkbox"/> Other items or information: <u>International Search Report, PCT/IPEA/409, Abstract of the Disclosure on a Separate Sheet, Application Data Sheet</u></li> </ol>		

JC13 Rec'd PCT/PTO 13 MAR 2002

U.S. APPLICATION NO. <b>107070950</b>	INTERNATIONAL APPLN. NO. PCT/FR00/02531	ATTORNEY DOCKET NO. 0512-1022
21. <input checked="" type="checkbox"/> The following fees are submitted:		CALCULATIONS PTO USE ONLY
BASIC NATIONAL FEE (37 CFR 1.492 (a) (1)-(5):		
Neither international preliminary examination fee nor international search fee paid to USPTO and international Search Report not prepared by the EPO or JPO ..... \$1040.00		
International preliminary examination fee not paid to USPTO but International Search Report prepared by the EPO or JPO ..... \$890.00		
International preliminary examination fee not paid to USPTO but International search fee paid to USPTO ..... \$740.00		
International preliminary examination fee paid to USPTO but all claims did not satisfy provision of PCT Article 33 (1)-(4) ..... \$710.00		
International preliminary examination fee paid to USPTO and all claims satisfied provision of PCT Article 33 (1)-(4) ..... \$100.00		
<b>ENTER APPROPRIATE BASIC FEE AMOUNT</b>		
Surcharge of \$130.00 for furnishing the oath or declaration than <input type="checkbox"/> 20- <input checked="" type="checkbox"/> 30 Months from the earliest claimed priority date (37 CFR 1.492(e))		
CLAIMS	NUMBER FILED	NUMBER EXTRA
Total Claims	10 - 20 =	0
Independent Claims	1 - 3 =	0
MULTIPLE DEPEND CLAIM(S) (if applicable)		+ \$280.00
<b>TOTAL OF ABOVE CALCULATION -</b> \$ 1,020.00		
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by $\frac{1}{2}$ .		
<b>SUBTOTAL =</b> \$ 1,020.00		
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492Z(f)).		
<b>TOTAL NATIONAL FEE =</b> \$ 1,020.00		
Fee for recording the enclosed assigned (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) \$40.00 per property +		
<b>TOTAL FEES ENCLOSED -</b> \$ 1,020.00		
Amount to be refunded \$		
Charged \$		
<input checked="" type="checkbox"/> A Check in the amount of <u>\$1,020.00</u> to cover all fees is attached. <input type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to Deposit account No. 25-0120 in the name of Young & Thompson, as described below. A duplicate copy of this sheet is enclosed. <input checked="" type="checkbox"/> The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17.		
SEND ALL CORRESPONDENCE TO: 745 South 23rd Street Arlington, VA 22202 Telephone (703) 521-2297 Y&T Customer No. 000466		SIGNATURE 
 <b>00466</b> BC/ia Date: <u>March 13, 2002</u>		PATENT TRADEMARK OFFICE 35.041 NAME _____ REGISTRATION NO. _____

10/070950  
 Rec'd PCT/PTO 19 JUN 2002

Supplemental Application Data Sheet

**Application Information**

Application Type:: Regular  
 Subject Matter:: Utility  
 Suggested Classification::  
 Suggested Group Art Unit::  
 CD-ROM or CD-R?:: None  
 Number of CD disks::  
 Number of Copies of CDs::  
 Sequence Submission?:: None  
 Computer Readable Form (CRF):: No  
 Number of copies of CRF:: 0  
 Title:: DYNAMIC DEVICE FOR DIFFUSING  
 PERFUMES AND PROCESS FOR  
 CONTROLLING THIS DEVICE  
 Attorney Docket Number:: 0512-1022  
 Request for Early  
 Publication?:: No  
 Request for Non-Publication?:: No  
 Suggested Drawing Figure::  
 Total Drawing Sheets:: 2  
 Small Entity?:: No  
 Latin Name::  
 Variety Denomination Name::  
 Petition Included?:: No  
 Petition Type::  
 Licensed US Gov't Agency::  
 Contract or Grant Numbers::  
 Secrecy Order in Parent No  
 Appl.?::

**Applicant Information**

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 State or Province of Residence::  
 Country of Residence:: FRANCE  
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 City of Mailing Address:: LIFFRE  
 State or Province of Mailing Address::  
 Country of Mailing Address:: FRANCE

Postal or Zip Code of Mailing Address:: 35340

**Correspondence Information**

Correspondence Customer Number:: 000466

**Representative Information**

Representative Customer Number::	000466
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**Domestic Priority Information**

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This applicatio	National Stage of	PCT/FR00/02531	9/13/00

**Foreign Priority Information**

Country::	Application Number::	Filing Date::	Priority Claimed::
FRANCE	99 11485	9/14/99	Yes

**Assignment Information**

Assignee Name::

Street of Mailing Address::

City of Mailing Address::

State or Province of Mailing Address::

Country of Mailing Address::

Postal or Zip Code of Mailing Address::

10/070950  
JC13 Rec'd PCT/PTO 13 MAR 2002

PATENT  
0512-1022

**IN THE U.S. PATENT AND TRADEMARK OFFICE**

In re application of: Dominique BALBI et al.

Appl. No.: **NEW** Group:

Filed: March 13, 2002 Examiner:

For: DYNAMIC DEVICE FOR DIFFUSING PERFUMES AND  
PROCESS FOR CONTROLLING THIS DEVICE

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, DC 20231

March 13, 2002

Sir:

The following preliminary amendments and remarks are  
respectfully submitted in connection with the above-identified  
application.

**IN THE CLAIMS:**

Please amend the claims as follows:

3. (amended) Device according to claim 1, characterized in  
that the means (16, 22) for storing samples comprise a card  
comprising frangible cells filled with perfume.

4. (amended) Device according to claim 1, characterized in  
that it is fitted with at least one socket (38, 40, 42, 43)  
for its connection to an output of an electronic appliance  
chosen from a computer, a multimedia terminal, a digital

television set, a digital television decoder and a video recorder, the said control algorithm being downloaded into the storage means of the device from this electronic appliance.

5. (amended) Method for diffusing perfumes in synchronism with information, in particular pictures, sounds, words or the like, presented to a user, by means of an electronic apparatus fitted with a device according to claim 1, characterized in that it consists, simultaneously with the presenting to the user of a predetermined sequence of information, in transmitting to the means (30) for controlling the device (10) for diffusing perfumes an algorithm for controlling the means for selectively contacting a sample of perfume with the ambient air as a function of the information presented to the user.

8. (amended) Method according to claim 5, characterized in that the algorithm for controlling the device is transmitted from a program stored in a disc of CD ROM type.

9. (amended) Method according to claim 5, characterized in that the electronic apparatus consists of a microcomputer or a multimedia terminal into which is loaded a navigation algorithm for browsing a computer network, for access to server centres, by way of an access provider, and in that the control algorithm is downloaded from a link, contained in a hypertext page stored in a server centre with which the microcomputer communicates, the said link engendering the

Docket No. 0512-1022

downloading of the control algorithm, from a memory area in which it is stored, to the control means (30).

10. (amended) Method according to claim 5, characterized in that the electronic apparatus consists of a digital television decoder, the control algorithm being transmitted by the emitter of the digital television signals and then stored in the control means (30) of the device (10).

REMARKS

Claims 1-10 are pending in the present application.

Entry of the above amendments is earnestly solicited.

An early and favorable first action on the merits is earnestly requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

Benoit Castel

Benoit Castel, Reg. No. 35,041

745 South 23<sup>rd</sup> Street  
Arlington, VA 22202  
Telephone (703) 521-2297

BC/ia  
Attachments

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

3. Device according to either ~~of Claims 1 or 2, claim 1,~~ characterized in that the means (16, 22) for storing samples comprise a card comprising frangible cells filled with perfume.
4. Device according to ~~one of Claims 1 to 3, claim 1,~~ characterized in that it is fitted with at least one socket (38, 40, 42, 43) for its connection to an output of an electronic appliance chosen from a computer, a multimedia terminal, a digital television set, a digital television decoder and a video recorder, the said control algorithm being downloaded into the storage means of the device from this electronic appliance.
5. Method for diffusing perfumes in synchronism with information, in particular pictures, sounds, words or the like, presented to a user, by means of an electronic apparatus fitted with a device according to ~~any one of claim 1, Claims 1 to 4,~~ characterized in that it consists, simultaneously with the presenting to the user of a predetermined sequence of information, in transmitting to the means (30) for controlling the device (10) for diffusing perfumes an algorithm for controlling the means for selectively contacting a sample of

perfume with the ambient air as a function of the information presented to the user.

8. Method according to ~~one of Claims 5 to 7, claim 5,~~ characterized in that the algorithm for controlling the device is transmitted from a program stored in a disc of CD ROM type.

9. Method according to ~~one of Claims 5 to 8, claim 5,~~ characterized in that the electronic apparatus consists of a microcomputer or a multimedia terminal into which is loaded a navigation algorithm for browsing a computer network, for access to server centres, by way of an access provider, and in that the control algorithm is downloaded from a link, contained in a hypertext page stored in a server centre with which the microcomputer communicates, the said link engendering the downloading of the control algorithm, from a memory area in which it is stored, to the control means (30).

10. Method according to ~~one of Claims 5 to 8, claim 5,~~ characterized in that the electronic apparatus consists of a digital television decoder, the control algorithm being transmitted by the emitter of the digital television signals and then stored in the control means (30) of the device (10).

31pt&gt;

JC13 Rec'd PCT/PTO 13 MAR 2002

Dynamic device for diffusing perfumes and process for  
controlling this device

The present invention relates to a device for  
5 diffusing perfumes, especially adapted so as to be  
associated with an electronic apparatus, such as a  
mass-market electronic apparatus, in particular a  
microcomputer, a television set, a digital television  
decoder, a video recorder, a multimedia terminal or the  
10 like.

It also concerns a method for diffusing  
perfumes which is implemented by means of such an  
apparatus.

The aim of the invention is to allow the  
15 diffusion of odorous substances originating from  
samples of perfumes in synchronism with information, in  
particular pictures, sounds, words or the like  
presented to a user on or by an electronic apparatus.

Its subject is therefore a device for diffusing  
20 perfumes in synchronism with information, in particular  
pictures, sounds, words or the like, presented to a  
user, characterized in that it comprises a receptacle  
into which are placed means for storing samples of  
perfume and which is fitted with means for the  
25 selective contacting of a sample with the ambient air,  
under the direction of control means into which is  
loaded an algorithm for controlling the operation of  
the said means for contacting a sample with the ambient  
air as a function of the information presented to the  
30 user.

This device for diffusing perfumes can also  
comprise one or more of the following characteristics,  
taken in isolation or according to all technically  
possible combinations:

35 - the storage means comprise a rotary disc  
supporting an assembly of reservoirs for storing the  
samples of perfume, the said means for contacting a  
sample with the ambient air comprising motor means for  
operating the angular displacement of the disc for the

positioning of one of the reservoirs opposite a window for diffusing perfume, under the supervision of the control means,

- the storage means comprise a card comprising  
5 frangible cells filled with perfume,

- it furthermore comprises second means of control of the said means of contacting a sample with the ambient air, which can be actuated manually by a user for the selective contacting of one of the samples of perfume with the ambient air.

- it is fitted with at least one socket for its connection to an output of an electronic appliance chosen from a microcomputer, a digital television set, a digital television decoder, a video recorder and a multimedia station, the said control algorithm being loaded and/or activated from this electronic appliance.

Another subject of the invention is a method for diffusing perfumes in synchronism with information, in particular pictures, sounds, words or the like, presented to a user, by means of an apparatus fitted with a device as defined hereinabove, characterized in that it consists, simultaneously with the presenting to the user of a predetermined sequence of information, in transmitting to the device for diffusing perfumes an algorithm for controlling the means for selectively contacting a sample of perfume with the ambient air.

Preferably, the step of transmitting the control algorithm comprises the steps of:

- transmission of a command for activation of the device for diffusing perfumes;

- transmission of a message for identification of the storage means to be disposed in the receptacle;

- transmission of a command for addressing a reservoir or cell filled with a sample of perfume;

35 - transmission of a command for diffusion of the sample of perfume contained in the reservoir or cell addressed;

- 3 -

- after a predetermined period of time, transmission of a command for halting diffusion of perfume; and
- transmission of a command for deactivation of

5 the device.

According to another characteristic of this process, subsequent to the command for halting diffusion, at least one second command for addressing another reservoir or cell and at least one second 10 command for diffusing the corresponding sample of perfume are emitted in succession.

Preferably, commands for initializing and/or activating the algorithm for controlling the device are introduced into the stream of information transmitted 15 to the user by means of a telecommunications network to which the apparatus is connected.

As a variant, the control algorithm is provided and/or activated in the form of a program stored in a disc of the CD ROM type.

According to yet another characteristic of this 20 method, the electronic apparatus consists of a microcomputer or a multimedia terminal into which is loaded a navigation algorithm for access to server centres, by way of an access provider, the control 25 algorithm being downloaded from a link contained in a hypertext page stored in the server centre with which the microcomputer or the terminal communicates, the said link engendering the downloading of the control algorithm, from a memory area in which it is stored, to 30 the microcomputer or the terminal.

As a variant, the apparatus consists of a digital television decoder, the control algorithm being transmitted and/or activated by the emitter of the digital television signals and then stored in the 35 device.

Other characteristics and advantages will emerge from the following description, given merely by way of example, and with reference to the appended drawings in which:

- Fig. 1 is a perspective diagrammatic view of a device for diffusing perfumes in accordance with the invention,

5 - Fig. 2 is a schematic diagram showing an exemplary embodiment of the diffusion device of Fig. 1;

- Fig. 3 is an enlarged view of the means for storing perfume samples incorporated into the device of Fig. 1; and

10 - Fig. 4 is a flowchart showing the various phases of the method implemented by means of the device of Fig. 1.

Represented in Fig. 1 is a device for diffusing perfumes in accordance with the invention, designated by the general numerical reference 10.

15 It is intended for engendering the emission of odorous substances from samples of perfume or of scent stored in appropriate sample storage means, doing so in synchronism with information presented to a user, in particular pictures, sounds, words or the like.

20 As is appreciated, it is intended to be associated with a mass-market electronic apparatus, such as a microcomputer, a multimedia terminal, a digital television set, a digital television decoder or a video recorder, on which or by means of which the 25 information is presented to the user. It therefore allows the emission of perfumes corresponding, for example, to pictures displayed on a screen.

As may be seen in Fig. 1, the device 10 mainly comprises a box 12 furnished with a receptacle 14 in 30 which are disposed the removable sample storage means 16, and with voltage supply means (not represented).

The receptacle 14 is shielded by a hinged flap 18 allowing the loading and the unloading of the receptacle 14, this flap 18 being furnished with a 35 window 20 through which the samples of perfume can be placed in communication with the ambient air.

Referring also to Figs. 2 and 3, the means for storing the perfume samples consist of a disc 22 supporting an assembly of reservoirs for storing the

perfume samples, such as 24, at least one of which is empty or filled with a nonodorous or neutralizing substance.

The disc and the containers are each  
5 identifiable by an address.

The empty container is intended to be positioned opposite the diffusion window 20 when the device is in the rest position.

A locating pin or fool-proof device 26 allows the accurate angular positioning of the disc 22 in the receptacle 14 and a window 27 enables the user to identify the disc.

The disc 22 is associated with motor means 28 ensuring the selective contacting of the samples with the ambient air, that is to say that they position one of the reservoirs 24 opposite the diffusion window 20, doing so as a function of the information which is presented to the user, in such a way as to diffuse a perfume corresponding, for example to pictures which are presented to him/her.

These motor means 28 consist of a stepper motor operated by operating means 30.

These operating means consist of a central unit in which are stored commands or an algorithm for controlling the motor 28.

The central unit is connected to push buttons 32 and 34, constituting secondary operating means which can be manually actuated by the user so as to engender the rotation of the disc 22 in such a way as to position one of the reservoirs 24 opposite the diffusion window 20.

It is thus possible, at will, to diffuse odorous substances even in the absence of corresponding visual or audible information.

35 It may be seen moreover in Fig. 2 that the  
central unit 30 is connected to an interface circuit  
36, of conventional type, itself attached to sockets  
38, 40, 42 and 43 for the connection of the device 10  
to an electronic appliance.

As was mentioned earlier, this appliance can consist of a microcomputer, a multimedia terminal, a digital television set, a digital television decoder or a video recorder.

5 Of course, it can be associated with any type of electronic device capable of presenting visual or audible information.

10 In the case where the device 10 is connected to a video recorder, the algorithm for controlling the stepper motor 28 is integrated into the microcontroller of the video recorder, when manufacturing the latter.

15 When it is connected to a digital television set or a digital television decoder, the control algorithm takes the form of downloaded software, also known under the application "java applet", this software being transmitted by the emitter of the television signals in the stream of information transmitted to the user by using a specific channel associated with the DVB ("Digital Video Broadcasting") 20 signalling and then stored in the device.

25 Finally, when it is associated with a microcomputer, the control algorithm also takes the form of a downloaded program or "java applet", this program being loaded when the microcomputer communicates for the first time with an appropriate server centre so as to provide such a service, and then stored in the device.

30 In this case, one of the hypertext pages retrieved from the server centre, and laid out according to the HTML (Hypertext Mark-up Language) 35 format presents an active link for retrieving the software stored in a corresponding memory area, for example in the same server centre, or in a different server centre, this control software being transmitted to the microcomputer and then to the diffusion device 10.

It will be noted that in the various embodiments which have just been envisaged, the device 10 is connected, preferably, to the lugs for connecting

to the sound card of the electronic apparatus or onto the USB bus of the microcomputer.

Thus, the software for controlling the motor 28 undergoes processing identical to sound files transmitted conventionally to acoustic speakers equipping the apparatus for broadcasting sound signals.

It will also be noted that, in the case of a microcomputer, the control algorithm can also be provided and/or activated in the form of software stored on a disc of the "CD-ROM" type.

The process for operating the device which has just been described will now be set forth with reference to Fig. 4.

This procedure begins with a first step 44 in the course of which the device receives the algorithm for controlling the motor 28, as was mentioned earlier (downloading of the applet).

It then continues with various steps for executing this algorithm.

To do this, in the course of a first step 46, the device 10 is activated. In response, the latter transmits an acknowledgement of receipt to the emitter of the control algorithm.

The identifier of the disc 22 to be inserted into the receptacle 14 is then provided and after acknowledgement by the user by closing the flap 18, the control algorithm is activated (step 48).

If such is not the case, that is to say if the user has not inserted the disc, the procedure continues with a step 50 in the course of which the user is again invited to insert the appropriate disc by using a display 51 (Figure 1) provided for this purpose. This display 51 is also used, in a general manner, for displaying information relating to the scents released.

During the next step 52, in the case where the disc has been inserted into the receptacle 14, the central unit 30 of the device 10 transmits to the motor 28 the address of the reservoir which should be positioned facing the diffusion window 20.

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During the next step 54, a diffusion command is sent to the motor means in such a way as to engender the rotation of the disc to an appropriate angular position.

5        Optionally, in the course of this step, a diffusion duration can also be transmitted to the motor means.

10      Likewise, in the course of this step, simultaneously with the transmission of the diffusion command, a message intended for the display 51 can be transmitted so as to provide information pertaining to the scent contained in the addressed reservoir.

15      At the termination of this step 54, or when the scheduled diffusion duration has elapsed, the central unit 30 transmits a halt diffusion command to the motor 28. In response, the motor 28 engenders the rotation of the disc 22 in such a way as to position the receptacle 24 which is devoid of odorous substance opposite the window 20.

20      As a variant, it is possible to engender the rotation of the disc 22 in such a way as to position, opposite the window 20, a reservoir filled with an appropriate neutralizing substance capable of absorbing the odours.

25      This variant is advantageous in the case where one wishes to engender the emission of another perfume.

30      If such is the case, the central unit 30 returns to the previous step 52 so as to transmit to the motor 28 a new address corresponding to another reservoir, as well as another diffusion command.

When the diffusion sequence is completed, the procedure continues with a step 56 in the course of which the device receives a deactivation command.

35      In the case of the coupling of the device to a microcomputer, this deactivation command can be effected automatically as soon as the HTML page containing the link addressing the memory area containing the control algorithm is abandoned.

The procedure which has just been described can also be replaced by a manual mode of operation, according to which the user himself/herself chooses, at will, the perfumes which he/she wishes to diffuse, by actuating the push buttons 32 and 34.

It will be noted that the invention is not limited to the embodiment described.

Specifically, in the description which has just been given, the means of storing the perfume samples consist of a rotary disc associated with motor means for controlling their angular position.

It is also possible, as a variant, to fit the device with means for storing samples of perfume taking the form of a card fitted with frangible cells each filled with a sample of perfume.

In this case, the means for operating the selective contacting of the samples with the ambient air consist for example of electrodes ensuring the selective melting of the wall of the cells.

20 It is also possible to fit the device, in the two embodiments envisaged, with means of ventilation or of heating, making it possible to improve the diffusion of the odorous substances.

It is appreciated that the invention which has  
25 just been described, which makes it possible to  
associate information, such as visual or audible  
information, with odours makes it possible, for  
example, to diffuse sea scents when a sea setting is  
presented on a screen.

30 It thus makes it possible, for example, for  
those in the perfume industry or cosmetics sector to  
associate with a site which can be accessed via a  
computer network, for example an Internet site, scents  
making it possible for the public to be presented with  
35 perfume samples offered for sale, and also to create  
new scents associated with atmospheres prevailing in a  
scene corresponding to pictures displayed, for example  
in the context of educational games.

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CLAIMS

1. Device for diffusing perfumes in synchronism with information, in particular pictures, sounds, words or the like, presented to a user, comprising a receptacle (14) into which are placed means (16, 22) for storing samples of perfume and which is fitted with means (28) for the selective contacting of a sample with the ambient air, under the direction of control means (30), characterized in that the control means comprise means for storing an algorithm for controlling the operation of the said means (28) for contacting a sample with the ambient air as a function of the information presented to the user.
- 15 2. Device according to Claim 1, characterized in that the means (16, 22) for storing samples comprise a rotary disc (22) supporting an assembly of reservoirs (24) for storing the samples of perfume and in that the means for contacting a sample with the ambient air comprise motor means (28) for operating the angular displacement of the disc for the positioning of one of the reservoirs opposite a window (20) for diffusing perfumes, as a function of the control algorithm.
- 20 3. Device according to either of Claims 1 or 2, characterized in that the means (16, 22) for storing samples comprise a card comprising frangible cells filled with perfume.
- 25 4. Device according to one of Claims 1 to 3, characterized in that it is fitted with at least one socket (38, 40, 42, 43) for its connection to an output of an electronic appliance chosen from a computer, a multimedia terminal, a digital television set, a digital television decoder and a video recorder, the said control algorithm being downloaded into the storage means of the device from this electronic appliance.
- 30 5. Method for diffusing perfumes in synchronism with information, in particular pictures, sounds, words or the like, presented to a user, by means of an

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electronic apparatus fitted with a device according to any one of Claims 1 to 4, characterized in that it consists, simultaneously with the presenting to the user of a predetermined sequence of information, in

5 transmitting to the means (30) for controlling the device (10) for diffusing perfumes an algorithm for controlling the means for selectively contacting a sample of perfume with the ambient air as a function of the information presented to the user.

10 6. Method according to Claim 5, characterized in that the step of transmitting the control algorithm is followed by a step of executing this control algorithm comprising the following steps:

15 - activation of the device (10) for diffusing perfumes;

- emission of a message identifying the means (16) for storing samples disposed in the receptacle;

- addressing of a reservoir (24) or of a cell filled with a sample of perfume;

20 - diffusing of the sample of perfume contained in the reservoir (24) or the cell addressed;

- after a predetermined period of time, halting of diffusion of perfume; and

- deactivation of the device (10).

25 7. Method according to Claim 6, characterized in that, subsequent to the step of halting diffusion, it comprises at least one second step of addressing another reservoir (24) or cell and at least one second step of diffusing the corresponding sample of perfume.

30 8. Method according to one of Claims 5 to 7, characterized in that the algorithm for controlling the device is transmitted from a program stored in a disc of CD ROM type.

35 9. Method according to one of Claims 5 to 8, characterized in that the electronic apparatus consists of a microcomputer or a multimedia terminal into which is loaded a navigation algorithm for browsing a computer network, for access to server centres, by way of an access provider, and in that the control

algorithm is downloaded from a link, contained in a hypertext page stored in a server centre with which the microcomputer communicates, the said link engendering the downloading of the control algorithm, from a memory area in which it is stored, to the control means (30).

5 10. Method according to one of Claims 5 to 8, characterized in that the electronic apparatus consists of a digital television decoder, the control algorithm being transmitted by the emitter of the digital 10 television signals and then stored in the control means (30) of the device (10).

FRANCE TELECOM

Dynamic device for diffusing perfumes and process for controlling this device

ABSTRACT

This device for diffusing perfumes in synchronism with information, in particular pictures, sounds, words or the like, presented to a user, comprises a receptacle (14) into which are placed means (16) for storing samples of perfume and which is fitted with means for the selective contacting of a sample with the ambient air, under the direction of control means into which is loaded an algorithm for controlling the operation of the said means for selectively contacting a sample with the ambient air, as a function of the information presented to the user.

Fig. 1

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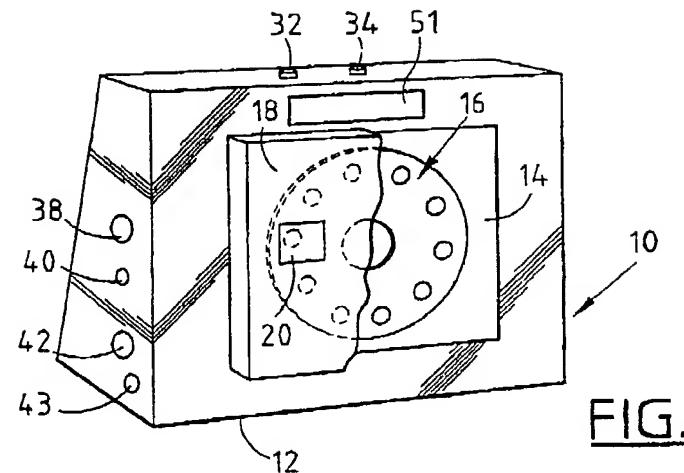


FIG.1

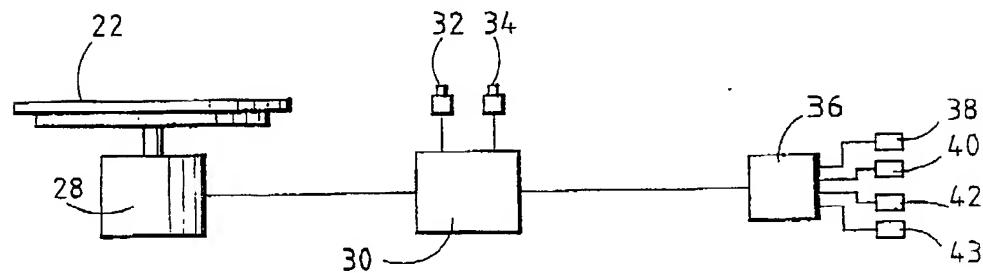


FIG.2

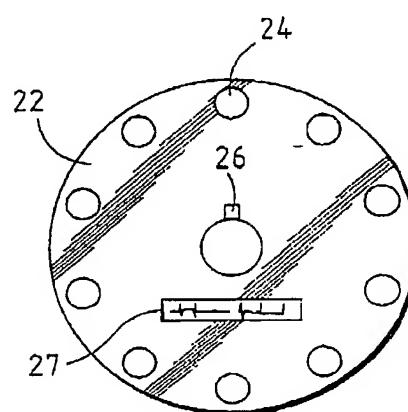


FIG.3

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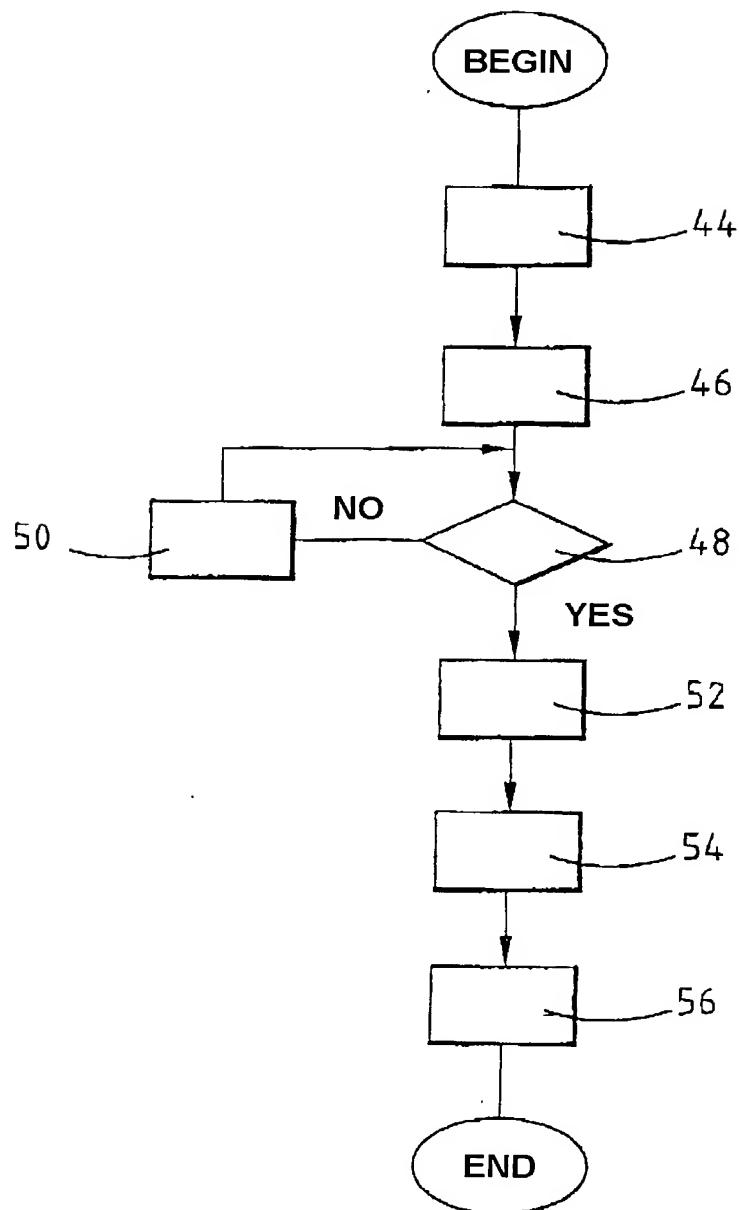


FIG.4

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Dynamic device for diffusing perfumes and process for  
controlling this device

ABSTRACT

This device for diffusing perfumes in synchronism with information, in particular pictures, sounds, words or the like, presented to a user, comprises a receptacle (14) into which are placed elements (16) for storing samples of perfume and which is fitted with elements for the selective contacting of a sample with the ambient air, under the direction of control unit into which is loaded an algorithm for controlling the operation of the elements for selectively contacting a sample with the ambient air, as a function of the information presented to the user.

## COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Dynamic device for diffusing perfumes and process for controlling this device

the specification of which: *(check one)*

### REGULAR OR DESIGN APPLICATION

is attached hereto.

was filed on \_\_\_\_\_ as application Serial No. \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable).

### PCT FILED APPLICATION ENTERING NATIONAL STAGE

was described and claimed in International application No. PCT/FR00/02531 filed on 13/09/00 and as amended on \_\_\_\_\_ (if any).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

### PRIORITY CLAIM

I hereby claim foreign priority benefits under 35 USC 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

### PRIOR FOREIGN APPLICATION(S)

Country	Application Number	Date of Filing (day, month, year)	Priority Claimed
FRANCE	99 11485	14/09/99	YES

*(Complete this part only if this is a continuing application.)*

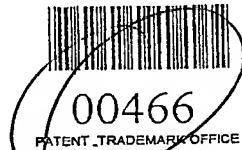
I hereby claim the benefit under 35 USC 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of 35 USC 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

## POWER OF ATTORNEY

The undersigned hereby authorizes the U.S. attorney or agent named herein to accept and follow instructions from \_\_\_\_\_ as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorney or agent and the undersigned. In the event of a change in the persons from whom instructions may be taken, the U.S. attorney or agent named herein will be so notified by the undersigned.

As a named inventor, I hereby appoint the registered patent attorneys represented by Customer No. 000466 to prosecute this application and transact all business in the Patent and Trademark Office connected therewith, including: Robert J. PATCH, Reg. No. 17,355, Andrew J. PATCH, Reg. No. 32,925, Robert F. HARGEST, Reg. No. 25,590, Benoit CASTEL, Reg. No. 35,041, Eric JENSEN, Reg. No. 37,855, Thomas W. PERKINS, Reg. No. 33,027, and Roland E. LONG, Jr., Reg. No. 41,949,

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Residence:

Post Office Address:

Full name of fourth joint inventor:  
(given name, family name)

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Citizenship:

Residence: